

# **Distribution Transformers Reliability; Industrial Plant In Saudi Arabia**

Shwehdi, M.H. Bakhashwain, J.M. Farag, A.S. Assiri, A.A.;Dept. of Electr. Eng., King Fahd Univ. of Pet.Miner., Dhahran;

**Power Engineering Society Winter Meeting, 2000. IEEE;Publication Date: 2000;Vol: 4, On page(s): 2769-2774 vol.4;ISBN: 0-7803-5935-6**

King Fahd University of Petroleum & Minerals

**<http://www.kfupm.edu.sa>**

## **Summary**

The paper presents statistics and analysis of distribution transformers failure reliability of one of the industrial plants in Saudi Arabia, which encompasses six different plant locations in the eastern region of Saudi Arabia. It contains the data that have been recorded between 1995-1998; this was prepared during the cooperative training period, where a KFUPM student spends about seven months in actual hands-on training in the field. The distribution transformers interruption duration and associated cause trends is also presented and reliability indices are developed for the six locations. Weather and geographical location influence on interruption is demonstrated. The accurate reliability data on transformers, together with similar data on other types of electrical equipment, are necessary for evaluating distribution system reliability. Information of this type is often the only means of showing economic justification for spares, redundancy or improved maintenance programs. The transformer reliability is of a paramount importance to distribution system reliability as well. This is because reliability cannot be added to a system at a late stage, it has to be incorporated from the start. More information was requested in the records but many were not filled out at time of failure occurrence. Recommendation for more detailed recording procedures of interruptions and equipment failure and causes are outlined for more meaningful data taken and analysis using standard evaluation methods including reliability worth assessment, system planning, operation, maintenance and improvements

For pre-prints please write to:[abstracts@kfupm.edu.sa](mailto:abstracts@kfupm.edu.sa)